

Electronic Supplementary Material

Identification of a uniquely expanded V1R (ORA) gene family in the Japanese grenadier anchovy (*Coilia nasus*)

Guoli Zhu^a, Wenqiao Tang^{a*}, Liangjiang Wang^b, Cong Wang^a, Xiaomei Wang^a

^a College of Fisheries and Life Science, Shanghai Ocean University, Shanghai, China

^b Department of Genetics and Biochemistry, Clemson University, Clemson, South Carolina, United States of America

* Corresponding author: College of Fisheries and Life Science, Shanghai Ocean University, Shanghai, China; phone: + 86-21-61900425; Email: wqtang@shou.edu.cn

Supplementary Text S6. Amino acid sequences of V1Rs in *Coilia nasus*.

>V1R1-Cna

MESEMTTRGLLYLSLTVLGIPGNSIVIWFVQLSYFERQLLPADAIV
LHLAFANLMVVGVRCLLESLATFKVCNVFSSTGCKAVIFVYRTSR
SLSIWLTFLSAYQCLSTAAPGSRWATARTAMAKNLGGIFLLLWLL
NTSMSSSAVLYSLGSSNNSSLMKHNINVQFCYVRFPSKLSVDANG
AVQVGRDLVPMILMTTASVIILVFLYHHSHQIKNIRGNTNSRGGGP
SAEQRAAITVVTLVMLYVTFYGVNDGLWMYTLSVKEAMSSSVVS
DLRIFFSSLYAAISPVIIVSNKKVNRLRCQLGEKALQSTKSDGHS
V*

>V1R2-Cna

MDLCLSIKGVSFLLQTGLGIFGNVLVLLAYIQIVCLEPHLLPVDIILC
HLAFTNLMLLRLCVPQTMTVFGLRNLLNDAGCKVVIYSYRISRA
LSVCITCMLSVFQALMLAPAKPFWVRLKTRLPSLVIPTFAALWFIN
MAVCIAAPFFSIAPKNGTVPAFTLNLFCHVDFRDNLNSYVINGVAV
STRDFIFVGFMGLGSSGYILVVLHQHAQKAHSIRRSQAGAACMETRA
ANTVVTLVTLYAVFFGIDNVIWIYMLTDQVPLVADMRVWFSSC
YASLSPFLIMTSNKKVKNRIMCVRASDQQQLSISTQDSRKMKD*

>V1R3-Cna

MHTTQPVGMLRIRVSDVQTVFYIFLVMLGILGNATTIGVIGEGI
VRDQGGGRSSDMILVNMAFSNLMVSVRTNLLVISDLGVEGMVP
VSHGPLGVAAVRQRVVHLLSAFHQTLLRIAPMSVTRGPSKFFF
IFGLIWFLNLLYSIPAFVFSTSGDRNSTETLMLVSSTTRPLLGCVWN
FPTVYNGLAYATTSIVIHESLPIVMSITNLGSSLTLYAHRSRSLLHS
QKNLEVPVIRRPAERRAAKVVILALIMLFISSWGTIIISVNYFNYN
RGTSTEFLLVIARFANITFIALSPIVLAGHGRLRAVLKSLLTH*

>V1R4-Cna

MSEVLTVDAIFGLLVSGIVGNILVIYVVFGSATENSFRHLPPSDAI
LVNLSLANLLTSLFRTVPIFISDLGLEVSLAPGWCRFLMWW
RAVGCWVTLALSAFHCAKLQRQRMVVGPLAQRERQQVWLAL

ALVGANLAFSLPALVYTTVHGNATVELMVISCTTRPLLGCVW
EFPTEEQGSASFASASLALNEVPLVLMGTNLATLHTLARHIRSVT
AAQQPQQQAELGRHVASERKAGHVIMALVSLFVVCWALQVAAVT
YYNHNGGNHAEGLLTVSHFSASLFVGFSMPVVALGHGKLRRRITA
MVLSCDHRAKCGAQGGAEQALVSDMSVSKQTELSKGQRDKRIIK
VEARGRT*

>V1R5-Cna

MDAEGWVESFARGTMCLLGIVGNNLAFSSPRSKSQLKTNDAL
FLNLAVSNLITNYMVDPDTMADFAGRWFMLTYCRIFRFCADLS
ETSSIFSTLFISVFWYQKLVGSLKRGGAPVRLDNLRLVAALLGGSW
MVAIVFSIPHILYVTIEEGDEPDCVDDFPSPTAHQIYEILYLSLANAV
PITGIVFASIQIVVTLLKNQQRIRATGAGTGEPSPDKPQDTADTTSP
GQAQAQQGSNSPSAQGPPSSAPGAAPVQQGQAAPKAQAKGSPGA
GGLVRAAKSVVAVASVFLVCWVTHLLRISSNVKTSKVTEVASYI
AASYTSIIPYIFLHGVKKLTNCRR*

>V1R6-Cna

MNPSPLTLFDCTPCLRVVTDSLRCGMALQVYLLILRGLVSVVG
IIGNVVLIQSILRLARFKTFEIFLLGLAFSNVEEILIVDIYDIVVNQLS
WMEISAWWCRLLKFLTVLGEIGSIAFTVIISIFRYQKLRDAERRISQ
TILMDDGRAVYGFCCGSVLFALALAVPTFVTNLDGHMGNLRRTS
CPPDFFQCPRSNCPLFNHLYKYLFIILCNLLPLIWTSCCLIIRVLI
GQQKAVHARQTVQPGSQAQTRSRRFRQSTVAILVAMAVFQVDWT
LYLVLHLTSSPYTFAAWSEMEFFITTHTTISPYVYGVGNLFSKA
LRCTG*